

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> s 4-methylene-1-glutamic acid/cn

L1 1 4-METHYLENE-L-GLUTAMIC ACID/CN

=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN

RN 16804-57-2 REGISTRY

CN L-Glutamic acid, 4-methylene- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Glutamic acid, 4-methylene-, L- (8CI)

OTHER NAMES:

CN γ -Methylene-L-glutamic acid

CN γ -Methyleneglutamic acid

CN **4-Methylene-L-glutamic acid**

CN 4-Methyleneglutamic acid

CN L- γ -Methyleneglutamate

CN L-4-Methyleneglutamic acid

FS STEREOSEARCH

MF C6 H9 N O4

CI COM

LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CHEMINFORMRX, EMBASE, IPA, NAPRALERT, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

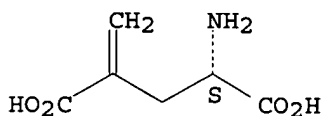
DT.CA Caplus document type: Conference; Dissertation; Journal; Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); PREP (Preparation)

Absolute stereochemistry. Rotation (+).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

77 REFERENCES IN FILE CA (1907 TO DATE)

3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

77 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

6.87

7.08

FILE 'CAPLUS' ENTERED AT 17:27:22 ON 06 JAN 2005

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FILE COVERS 1907 - 6 Jan 2005 VOL 142 ISS 2
FILE LAST UPDATED: 5 Jan 2005 (20050105/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 16804-57-2/prep
77 16804-57-2
3242962 PREP/RL
L2 10 16804-57-2/PREP
(16804-57-2 (L) PREP/RL)

=> s 16804-57-2/proc
77 16804-57-2
3606782 PROC/RL
L3 5 16804-57-2/PROC
(16804-57-2 (L) PROC/RL)

=> s 16804-57-2/pur
77 16804-57-2
204429 PUR/RL
L4 0 16804-57-2/PUR
(16804-57-2 (L) PUR/RL)

=> s 12 or 13
L5 15 L2 OR L3

=> s 15 and pyroglutam?
4142 PYROGLUTAM?
L6 3 L5 AND PYROGLUTAM?

=> d 1-3 ibib abs hitstr

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:392435 CAPLUS
DOCUMENT NUMBER: 140:375488
TITLE: Process for synthesizing L-methyleneglutamic acid and analogs
INVENTOR(S): Kochat, Harry; Chen, Xinghai; Wu, Ye; Huang, Qiuli; Wang, Jianyan; Gerusz, Vincent
PATENT ASSIGNEE(S): Bionumerik Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004039314	A2	20040513	WO 2003-US33236	20031022
WO 2004039314	A3	20041209		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR			
US 2004106826	A1	20040603	US 2003-627484	20030725
PRIORITY APPLN. INFO.:			US 2002-421489P	P 20021025

OTHER SOURCE(S): CASREACT 140:375488

AB A process for synthesizing 4-methylene-L-glutamic acid and analogs comprises converting (2S)-pyroglutamic acid or a derivative to a 4-enamine derivative, hydrolysis to a 4-hydroxymethylene derivative, reduction to a 4-methylene derivative, and treatment with strong base to effect ring cleavage. In the examples, L-pyroglutamic acid was C/N-protected and reacted with DMF diisopropyl acetal to form intermediate Et 4-[(dimethylamino)methylene]-N-(tert-butoxycarbonyl)-L-pyroglutamate, which was converted into 4-methylene-L-glutamic acid hydrochloride.

IT 16804-57-2P

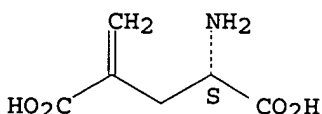
RL: SPN (Synthetic preparation); PREP (Preparation)

(process for synthesizing L-methyleneglutamic acid and analogs)

RN 16804-57-2 CAPLUS

CN L-Glutamic acid, 4-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+)..



L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:631298 CAPLUS

DOCUMENT NUMBER: 121:231298

TITLE: Efficient synthesis of 4-methylene-L-glutamic acid and its cyclopropyl analog

AUTHOR(S): Ezquerro, Jesus; Pedregal, Concepcion; Mico, Irene; Najera, Carmen

CORPORATE SOURCE: Cent. Invest. Lilly S. A., Valdeolmos, 28130, Spain

SOURCE: Tetrahedron: Asymmetry (1994), 5(5), 921-6

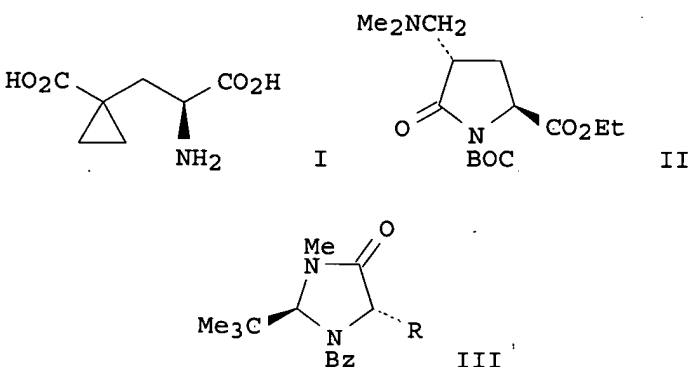
CODEN: TASYE3; ISSN: 0957-4166

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 121:231298

GI



AB Title compds. L-NHCH(CO₂H)CH₂C(CO₂H):CH₂ and cyclopropyl analog I were obtained from protected pyroglutamate Boc-pGlu-OEt (Boc = Me₃CO₂C) in 2 and 3 steps, resp. Key methylenepyroglutamate intermediate II was prepared by reaction of the protected pyroglutamate lithium lactam enolate with Eschenmoser's salt. Cyclopropyl derivative I was also prepared from imidazolidone III (R = H) in 3 steps. The intermediate III [R = CH₂C(CO₂Bu):CH₂] was obtained by diastereoselective reaction of the lithium enolate of III (R = H) with Bu (2-tosylmethyl)acrylate.

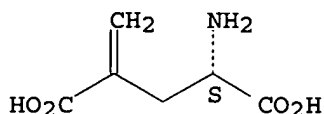
IT 16804-57-2P, 4-Methylene-L-glutamic acid

RL: SPN (Synthetic preparation); PREP (Preparation)

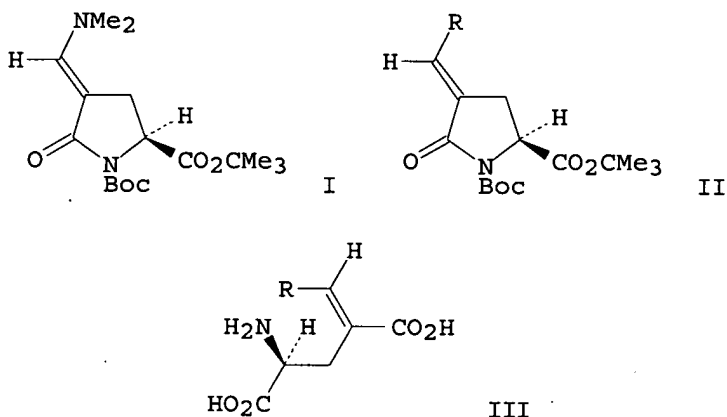
(preparation of, from **pyroglutamic acid**)

RN 16804-57-2 CAPLUS
CN L-Glutamic acid, 4-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:671664 CAPLUS
DOCUMENT NUMBER: 119:271664
TITLE: Synthesis of naturally occurring 4-alkylideneglutamic acids
AUTHOR(S): Moody, Claire M.; Young, Douglas W.
CORPORATE SOURCE: Sch. Chem. Mol. Sci., Univ. Sussex, Falmer/Brighton, BN1 9QJ, UK
SOURCE: Tetrahedron Letters (1993), 34(29), 4667-70
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 119:271664
GI



AB Enaminone I (Boc = Me3CO2C) reacted with Grignard reagents RMgBr (R = Me, Et, Ph, C.tplbond.CH) to afford (E)-alkylidene derivs. II. II (R = H, Me, Et) were converted to 4-alkylideneglutamic acids III (R = H, Me, Et).

IT 16804-57-2P
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(preparation of)

RN 16804-57-2 CAPLUS
CN L-Glutamic acid, 4-methylene- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

